AMENDMENTS TO THE CLAIMS

1-13. (Cancelled)

14. (Currently amended) A compound of formula III:

or a pharmaceutically acceptable salt thereof, wherein:

R⁶ and R⁹ are independently selected from H, R, OH, OR, SH, SR, NH₂, NHR, NRR', nitro, Me₃Sn and halo;

R and R' are independently selected from optionally substituted C_{1-12} alkyl, C_{3-20} heterocyclyl and C_{5-20} aryl groups;

the compound being a dimer with each monomer being of formula (III), where the R⁸ groups of each monomer form together a dimer bridge having the formula -X-R"-X- linking the monomers, where R" is a C₃₋₁₂ alkylene group, which chain may be interrupted by one or more heteroatoms and/or aromatic rings, and each X is independently selected from O, S, or NH, and R⁷ is selected from H, R, OH, OR, SH, SR, NH₂, NHR, NRR', nitro, Me₃Sn and halo, or any pair of adjacent groups from R⁶ to R⁹ together form a group

-O- $(CH_2)_p$ -O-, where p is 1 or 2;

either R^{10} and R^{16} together form a double bond between N10 and C11, or R^{10} is H and R^{16} is OH, and

 R^{15} is an optionally substituted C_{5-20} aryl group,

wherein the optional substituents are independently selected from the group consisting of C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{3-20} heterocyclyl, C_{5-20} aryl, halo, hydroxyl, other $\underline{-OR^1}$ wherein $\underline{R^1}$ is a C_{1-7} alkyl group or C_{3-20} heterocyclyl group or C_{5-10} aryl group, alkoxy, acetal $\underline{-CH(OR^1)(OR^2)}$ wherein $\underline{R^1}$ is as defined above and $\underline{R^2}$ is independently a $\underline{C_{1-7}}$ alkyl group or $\underline{C_{3-20}}$ heterocyclyl group or $\underline{C_{5-10}}$ aryl group or $\underline{R^1}$ and $\underline{R^2}$ together with the two oxygen atoms to which they are attached form a heterocyclic ring having from 4 to 8 ring atoms, hemiacetal $\underline{-CH(OH)(OR^1)}$ wherein $\underline{R^1}$ is as defined above, ketal, hemiketal, oxo, thione, imino, formyl, acyl, carboxy, thiocarboxy, thiolocarboxy, imidic acid $\underline{-C(=NH)OH}$, hydroxamic acid $\underline{-C(=NOH)OH}$, ester $\underline{-C(=O)OR^1}$ wherein $\underline{R^1}$ is as defined above, acyloxy, oxycarboyloxy, amino, amido,

U.S. Application No. 10/598,518 Response to Office Action mailed September 28, 2009

thioamido, acylamido, aminocarbonyloxy, ureido, guanidine, tetrazolyl, amindino, nitro, nitroso, azido, cyano, isocyano, cyanato, isocyanato, thiocyano, isothiocyano, sulfhydryl, thioether, disulfide, sulfine, sulfone, sulfinie acid -S(=O)OH, $-SO_2H$, sulfonic acid $-S(=O)_2OH$, $-SO_3H$, sulfinate, sulfonate, sulfinyloxy, sulfonyloxy, sulfate, sulfamyl, sulfonamide, sulfamino, sulfonamino, phosphino, phosphor, phosphinyl, phosphono, phosphono ester - $P(=O)(OR^{17})_2$ wherein R^{17} is -H or C_{1-7} alkyl group or C_{3-20} heterocyclyl group or C_{5-20} aryl group, phosphonooxy, phosphonooxy ester $-PO(=O)(OR^{17})_2$ wherein R^{17} is as defined above, phosphorous acid $-OP(OH)_2$, phosphate, phosphoramidite, or and phosphoramidate.

- 15. (Previously presented) A compound according to claim 14, wherein the dimer bridge has the formula $-O-(CH_2)_n-O-$ linking the monomers, where n is from 3 to 12.
- 16. (Previously presented) A compound according to claim 15, wherein n is from 3 to 7.
- 17. (Previously presented) A compound according to claim 14, wherein R¹⁰ and R¹⁶ together form a double bond between N10 and C11.
- 18. (Previously presented) A compound according to claim 14, wherein R⁹ is H.
- 19. (Previously presented) A compound according to claim 14, wherein R⁷ and R⁸ are independently selected from H, OH, OR, SH, NH₂, NHR, NRR' and halo.
- 20. (Canceled)
- 21. (Previously presented) A pharmaceutical composition containing a compound of claim 14, and a pharmaceutically acceptable carrier or diluent.
- 22. (Canceled)
- 23. (Currently amended) A method of treatment of <u>chronic myeloid</u> leukemia, comprising administering to a subject in need of treatment a therapeutically-effective amount of a compound of claim 14.
- 24-29. (Cancelled)

30. (Currently amended) A method of synthesizing synthesising a compound of formula III:

comprising reacting_a compound of formula I:

with a compound of formula z-R¹⁵ in a coupling reaction, wherein

R⁶ and R⁹ are independently selected from H, R, OH, OR, SH, SR, NH₂, NHR, NRR', nitro, Me₃Sn and halo;

R and R' are independently selected from optionally substituted

 C_{1-12} alkyl, C_{3-20} heterocyclyl and C_{5-20} aryl groups;

R⁷ and R⁸ are independently selected from H, R, OH, OR, SH, SR, NH₂, NHR, NRR', nitro, Me₃Sn and halo,

or the compound is a dimer with each monomer being of formula (I), where the R^7 groups or R^8 groups of each monomers form together a dimer bridge having the formula -X-R"-X- linking the monomers, where R" is a C_{3-12} alkylene group, which chain may be interrupted by one or more heteroatoms and/or aromatic rings, and each X is independently selected from O, S, or NH; or any pair of adjacent groups from R^6 to R^9 together form a group

 $-O-(CH_2)_p-O-$, where p is 1 or 2;

R¹⁰ is a carbamate-based nitrogen protecting group;

R² is a labile leaving group;

R¹⁶ is either O-R¹¹, where R¹¹ is an oxygen protecting group, or OH, or R¹⁰ and R¹⁶ together form a double bond between N10 and C11;

z-R¹⁵ is any reactant suitable for a coupling reaction; and

 R^{15} is an optionally substituted C_{5-20} aryl group,

wherein the optionally optional substituents are independently selected from the group consisting of C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{3-20} heterocyclyl, C_{5-20} aryl, halo, hydroxyl, other OR wherein R is a C_{1-7} alkyl group or C_{3-20} heterocyclyl group or C_{5-10} aryl group, alkoxy, acetal —

U.S. Application No. 10/598,518 Response to Office Action mailed September 28, 2009

CH(OR¹)(OR²) wherein R¹ is as defined above and R² is independently a C_{1-7} alkyl group or C_{3-20} heterocyclyl group or C_{5-10} aryl group or R¹ and R² together with the two oxygen atoms to which they are attached form a heterocyclic ring having from 4 to 8 ring atoms, hemiacetal — $CH(OH)(OR^1)$ wherein R¹ is as defined above, ketal, hemiketal, oxo, thione, imino, formyl, acyl, carboxy, thiocarboxy, thiolocarboxy, imidic acid -C(=NH)OH, hydroxamic acid -C(=NOH)OH, ester $-C(=O)OR^1$ wherein R¹ is as defined above, acyloxy, oxycarboyloxy, amino, amido, thioamido, acylamido, aminocarbonyloxy, ureido, guanidine, tetrazolyl, amindino, nitro, nitroso, azido, cyano, isocyano, cyanato, isocyanato, thiocyano, isothiocyano, sulfhydryl, thioether, disulfide, sulfine, sulfone, sulfinic acid -S(=O)OH, $-SO_2H$, sulfonic acid $-S(=O)_2OH$, $-SO_3H$, sulfinate, sulfonate, sulfinyloxy, sulfonyloxy, sulfate, sulfamyl, sulfonamide, sulfamino, sulfonamino, phosphino, phosphor, phosphinyl, phosphono, phosphone ester $-P(=O)(OR^{17})_2$ wherein R^{17} is -H or C_{1-7} alkyl group or C_{3-20} heterocyclyl group or C_{5-20} aryl group, phosphonooxy, phosphonooxy ester $-PO(=O)(OR^{17})_2$ wherein R^{17} is as defined above, phosphorous acid $-OP(OH)_2$, phosphate, phosphoramidite, er and phosphoramidate.

- 31. (Previously presented) A method according to claim 30, wherein the synthesis of said compound of formula III uses a palladium catalysed coupling step.
- 32. (Previously presented) A method according to claim 31, wherein the palladium catalyst is Pd(PPh₃)₄, Pd(OCOCH₃)₂, PdCl₂ or Pd(dba)₃.
- 33. (Previously presented) A method according to claim 31, wherein the coupling reaction is performed under microwave conditions.
- 34. (Previously presented) A method according to claim 31, wherein the palladium catalyst is solid supported.
- 35. (Currently amended) A compound of formula III

-5-

and salts and solvates thereof, wherein:

R⁶ and R⁹ are independently selected from H, R, OH, OR, SH, SR, NH₂, NHR, NRR', nitro, Me₃Sn and halo;

R and R' are independently selected from optionally substituted C_{1-12} alkyl, C_{3-20} heterocyclyl and C_{5-20} aryl groups;

the compound being a dimer with each monomer being of formula (III), where the R^8 groups of each monomer form together a dimer bridge having the formula -X-R''-X- linking the monomers, where R'' is a C_{3-12} alkylene group, which chain may be interrupted by one or more heteroatoms and/or aromatic rings, and each X is independently selected from O, S, or NH, and R^7 is selected from H, R, OH, OR, SH, SR, NH_2 , NHR, NRR', nitro, Me_3Sn and halo; or any pair of adjacent groups from R^6 to R^9 together form a group $-O-(CH_2)_p-O-$, where P is 1 or 2; R^{10} is a carbamate-based nitrogen protecting group;

R¹⁶ is –O–R¹¹, where R¹¹ is an oxygen protecting group or H; and R¹⁵ is an optionally substituted C₅₋₂₀ aryl group,

wherein the optionally optional substituents are independently selected from the group consisting of C₁₋₁₂ alkyl, C₃₋₁₂ cycloalkyl, C₃₋₂₀ heterocyclyl, C₅₋₂₀ aryl, halo, hydroxyl, ether –OR wherein R is a C₁₋₇ alkyl group or C₃₋₂₀ heterocyclyl group or C₅₋₁₀ aryl group, alkoxy, acetal -CH(OR¹)(OR²) wherein R¹ is as defined above and R² is independently a C₁₋₇ alkyl group or C₃₋₂₀ heterocyclyl group or C₅₋₁₀ aryl group or R¹ and R² together with the two oxygen atoms to which they are attached form a heterocyclic ring having from 4 to 8 ring atoms, hemiacetal -CH(OH)(OR1) wherein R1 is as defined above, ketal, hemiketal, oxo, thione, imino, formyl, acyl, carboxy, thiocarboxy, thiolocarboxy, imidic acid -C(=NH)OH, hydroxamic acid -C(=NOH)OH, ester -C(=O)OR1 wherein R1 is as defined above, acyloxy, oxycarboyloxy, amino, amido, thioamido, acylamido, aminocarbonyloxy, ureido, guanidine, tetrazolyl, amindino, nitro, nitroso, azido, cyano, isocyano, cyanato, isocyanato, thiocyano, isothiocyano, sulfhydryl, thioether. disulfide, sulfine, sulfone, sulfinic acid -S(=O)OH, -SO2H, sulfonic acid -S(=O)2OH, -SO3H, sulfinate, sulfonate, sulfinyloxy, sulfonyloxy, sulfate, sulfamyl, sulfonamide, sulfamino, sulfonamino, sulfinamino, phosphino, phosphor, phosphinyl, phosphono, phosphono ester -P(=O)(OR¹⁷)₂ wherein R¹⁷ is –H or C_{1-7} alkyl group or C_{3-20} heterocyclyl group or C_{5-20} aryl group, phosphonooxy, phosphonooxy ester_PO(=O)(OR¹⁷)₂ wherein R¹⁷ is as defined above. phosphorous acid <u>OP(OH)</u>2, phosphate, phosphoramidite, or and phosphoramidate.

36. (Previously presented) A compound according to claim 35, wherein R¹⁰ is Troc.

- 37. (Previously presented) A compound according to claim 35, wherein R¹¹ is a silyl oxygen protecting group or THP.
- 38. (Currently amended) A compound of formula I:

for use in the synthesis of a compound of formula III:

wherein:

R⁶ and R⁹ are independently selected from H, R, OH, OR, SH, SR, NH₂, NHR, NRR', nitro, Me₃Sn and halo;

R and R' are independently selected from optionally substituted

 $C_{1\text{--}12}$ alkyl, $C_{3\text{--}20}$ heterocyclyl and $C_{5\text{--}20}$ aryl groups;

 R^7 is selected from H, R, OH, OR, SH, SR, NH₂, NHR, NRR', nitro, Me₃Sn and halo, the compound of formula III being dimer with each monomer being of formula III, where the R^8 groups of each monomer form together a dimer bridge having the formula -X-R''-X- linking the monomers, where R'' is a C_{3-12} alkylene group, which chain may be interrupted by one or more heteroatoms and/or aromatic rings, and each X is independently selected from O, S, or NH; or any pair of adjacent groups from R^6 to R^9 together form a group $-O-(CH_2)_p-O-$, where p is 1 or 2;

R¹⁰ is a carbamate-based nitrogen protecting group, or either R¹⁰ and R¹⁶ together form a double bond between N10 and C11, or R¹⁰ is H and R¹⁶ is OH;

U.S. Application No. 10/598,518
Response to Office Action mailed September 28, 2009

R¹¹ is an oxygen protecting group or H;

R² is a labile leaving group; and

R¹⁵ is an optionally substituted C₅₋₂₀ aryl group,

wherein the optionally optional substituents are independently selected from the group consisting of C₁₋₁₂ alkyl, C₃₋₁₂ cycloalkyl, C₃₋₂₀ heterocyclyl, C₅₋₂₀ aryl, halo, hydroxyl, ether –OR wherein R is a C₁₋₇ alkyl group or C₃₋₂₀ heterocyclyl group or C₅₋₁₀ aryl group, alkoxy, acetal -CH(OR¹)(OR²) wherein R¹ is as defined above and R² is independently a C₁₋₇ alkyl group or C₃₋₂₀ heterocyclyl group or C₅₋₁₀ aryl group or R¹ and R² together with the two oxygen atoms to which they are attached form a heterocyclic ring having from 4 to 8 ring atoms, hemiacetal -CH(OH)(OR¹) wherein R¹ is as defined above, ketal, hemiketal, oxo, thione, imino, formyl, acyl. carboxy, thiocarboxy, thiolocarboxy, imidic acid -C(=NH)OH, hydroxamic acid -C(=NOH)OH. ester -C(=O)OR¹ wherein R¹ is as defined above, acyloxy, oxycarboyloxy, amino, amido, thioamido, acylamido, aminocarbonyloxy, ureido, quanidine, tetrazolyl, amindino, nitro, nitroso, azido, cyano, isocyano, cyanato, isocyanato, thiocyano, isothiocyano, sulfhydryl, thioether, disulfide, sulfine, sulfone, sulfinic acid -S(=O)OH, -SO₂H, sulfonic acid -S(=O)₂OH, -SO₃H, sulfinate, sulfonate, sulfinyloxy, sulfonyloxy, sulfate, sulfamyl, sulfonamide, sulfamino, sulfonamino, sulfinamino, phosphino, phosphor, phosphinyl, phosphono, phosphono ester -- $P(=O)(OR^{17})_2$ wherein R^{17} is -H or $C_{1.7}$ alkyl group or $C_{3.20}$ heterocyclyl group or $C_{5.20}$ aryl group, phosphonooxy, phosphonooxy ester –PO(=O)(OR¹⁷), wherein R¹⁷ is as defined above. phosphorous acid -OP(OH)₂, phosphoramidite, or and phosphoramidate.

- 39. (Previously presented) A compound according to claim 19, wherein R⁷ is OR.
- 40. (Previously presented) A compound according to claim 19, wherein R⁷ is OMe.
- 41. (Previously presented) A compound according to claims 14 wherein R^{15} is a C_{5-20} aryl group optionally substituted with a substituent selected from the group consisting of R, OH, OR, NH₂, NHR, NRR', CN, C(=O)H, C(=O)OH and halo.
- 42. (Previously presented) A compound according to claim 14, wherein R^{15} is a C_{5-20} aryl group substituted by OR.
- 43. (Previously presented) A compound according to claim 14, wherein R^{15} is a C_{5-20} aryl group substituted by OMe.

- 44. (Previously presented) A compound according to claim 14, wherein R^6 is H, R^7 is OMe, X is O, R" is $(CH_2)_3$, R^9 is H, R^{10} and R^{16} together form a double bond between N10 and C11, and R^{15} is para-methoxyphenyl.
- 45. (New) The compound of claim 14, wherein R" is a C_{3-12} alkylene group interrupted by one or more heteroatoms, wherein the one or more heteroatoms are independently selected from the group consisting of O, S, and N.
- 46. (New) A compound of the following formula:

or a pharmaceutically acceptable salt thereof.

- 47. (New) The compound of claim 14, wherein R and R' are unsubstituted.
- 48. (New) The compound of claim 14, wherein R^{15} is an unsubstituted C_{5-20} aryl group.
- 49. (New) The compound of claim 14, wherein R^{15} is a singly substituted C_{5-20} aryl group.